

AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 *et seq.*, the "Act"),

Commonwealth Utilities Corporation  
P.O. Box 1220  
Saipan, MP 96950

is authorized to discharge treated wastewater from the Sadog Tase Wastewater Treatment Plant through the Saipan Lagoon Outfall (Discharge Serial No. 001), located off Garapan, Saipan, Commonwealth of the Northern Mariana Islands,

Latitude: 15° 13' 35" N  
Longitude: 145° 43' 40" E

to Class A marine receiving waters of Tanapag Harbor (named Puerto Rico Industrial) of the Philippine Sea, in accordance with effluent limitations, monitoring requirements, and other conditions set forth herein, and in the attached USEPA Region 9 *Standard Federal NPDES Permit Conditions*, dated May 10, 1990.

This permit shall become effective on \_\_\_\_\_, 2001.

This permit and the authorization to discharge shall expire at midnight, \_\_\_\_\_, 2006.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2001.

For the Regional Administrator

\_\_\_\_\_  
Alexis Strauss, Director  
Water Division

## TABLE OF CONTENTS

PART A.	Effluent Limitations and Monitoring Requirements
PART B.	Definitions
PART C.	Pretreatment Requirements
PART D.	Sludge/Biosolids Limitations and Monitoring Requirements
PART E.	Receiving Water Monitoring Requirements and Conditions
PART F.	General Monitoring and Reporting Requirements
PART G.	Attachments
	1. Location Map
	2. Process Diagrams (liquid and solids)
	3. Receiving Water Monitoring Stations
	4. Standard NPDES Permit Conditions

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. Effluent limitations and monitoring requirements are based upon an average daily design flow of 0.21 m<sup>3</sup>/sec (4.8 MGD). The permittee is authorized to discharge from Discharge Serial No. 001:

- a. Such discharge shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Flow (m³/day)	n/a <sup>1</sup>	n/a	n/a	<sup>2</sup>	<sup>2</sup>	<sup>2</sup>	Continuous	Continuous
Biochemical Oxygen Demand (5-day) <sup>3</sup>	1,201	1,801	n/a	30 mg/L	45 mg/L	n/a	3 days/week	8 hr Composite
	Both the influent and the effluent shall be monitored. The arithmetic mean of the BOD <sub>5</sub> values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.							

<sup>1</sup> n/a = not applicable.

<sup>2</sup> Monitoring and reporting required. No limitation set at this time.

<sup>3</sup> Discharge limitation is based on federal secondary treatment standards in accordance with 40 CFR 133.102(c). Mass emission rate limitation is calculated using an average daily design flow of 0.21 m<sup>3</sup>/sec (4.8 MGD).

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Total Suspended Solids <sup>3</sup>	1,201	1,801	n/a	30 mg/L	45 mg/L	n/a	3 days/week	8 hr Composite
	Both the influent and the effluent shall be monitored. The arithmetic mean of the TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period.							
Settleable Solids	n/a			1 ml/L	n/a	2 ml/L	Once/day	Discrete
Oil and grease	<sup>2</sup>	n/a	<sup>2</sup>	<sup>2</sup>	n/a	<sup>2</sup>	Quarterly <sup>4</sup>	Discrete
Whole Effluent Toxicity (P) or (F) <sup>5</sup>	n/a			n/a	n/a	Pass <sup>5</sup>	Quarterly	24 hr Composite

<sup>4</sup> January - March; April - June; July - September; and October - December.

<sup>5</sup> See Part A.5 of this permit for explanation of requirements.

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Enterococci <sup>6</sup>	n/a			4,850 CFU/100 mL	n/a	9,730 CFU/100 mL	Weekly	Discrete
Total Chlorine Residual <sup>7</sup>	0.26	n/a	0.52	6.5 ug/L	n/a	13 ug/L	3 days/week	Discrete
pH <sup>8</sup>	Not more than 0.5 units from a value of 8.1.						3 days/week	Discrete
Nitrate-Nitrogen <sup>9</sup>	760	n/a	1,600	19 mg/L	n/a	39 mg/L	Quarterly	24 hr Composite

<sup>6</sup> Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d). Analyze using Method 1600, *Membrane Filter Test Method for Enterococci in Water* (EPA 821-R-97-004, May 1997).

<sup>7</sup> Upon initiation and throughout the duration of effluent chlorination, the permittee shall monitor total chlorine residual. Concentration limitation is based on best professional judgement, USEPA water quality criteria, and 40 CFR 122.44(d), and is calculated in accordance with *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). Mass emission rate limitation is calculated using an average daily design flow of 0.21 m<sup>3</sup>/sec (4.8 MGD). Contact time following chlorination and prior to effluent discharge shall not be less than 15 minutes.

<sup>8</sup> Limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d).

<sup>9</sup> Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d). Mass emission rate limitation is calculated using an average daily design flow of 0.21 m<sup>3</sup>/sec (4.8 MGD).

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Total Nitrogen <sup>9</sup>	1,200	n/a	2,300	29 mg/L	n/a	58 mg/L	Quarterly	24 hr Composite
Orthophosphate <sup>9</sup>	80	n/a	200	2	n/a	4 mg/L	Quarterly	24 hr Composite
Total Phosphorous <sup>9</sup>	80	n/a	200	2 mg/L	n/a	4 mg/L	Quarterly	24 hr Composite
Unionized Ammonia <sup>9</sup>	30	n/a	80	0.8 mg/L	n/a	2 mg/L	Quarterly	24 hr Composite
Copper <sup>10</sup>	0.056	n/a	0.12	1.4 ug/L	n/a	2.9 ug/L	Quarterly	24 hr Composite
Nickel <sup>10</sup>	1.5	n/a	3.0	37 ug/L	n/a	75 ug/L	Quarterly	24 hr Composite

<sup>10</sup>

Concentration limitation is based on applicable *CNMI Water Quality Standards* and 40 CFR 122.44(d), and is calculated in accordance with *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, March 1991). Mass emission rate limitation is calculated using an average daily design flow of 0.21 m<sup>3</sup>/sec (4.8 MGD).

Effluent Characteristic	Maximum Discharge Limitations Unless Otherwise Noted						Monitoring Requirements	
	Average Monthly (lbs/day)	Average Weekly (lbs/day)	Maximum Daily (lbs/day)	Average Monthly	Average Weekly	Maximum Daily	Monitoring Frequency	Sample Type
Silver <sup>10</sup>	0.044	n/a	0.092	1.1 ug/L	n/a	2.3 ug/L	Quarterly	24 hr Composite
Zinc <sup>10</sup>	1.9	n/a	3.8	47 ug/L	n/a	95 ug/L	Quarterly	24 hr Composite
Priority Toxic Pollutants (excluding asbestos) <sup>11</sup>	<sup>2</sup>	n/a	<sup>2</sup>	<sup>2</sup>	n/a	<sup>2</sup>	Oct 2000/ Oct 2003	<sup>11</sup>

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Priority toxic pollutants (excluding asbestos) are listed in 40 CFR 131.36(b)(1). The permittee shall collect *24 hour composite samples* for metals, 2,3,7,8-TCDD (dioxin), pesticides, base-neutral extractables, and acid-extractables. The permittee shall collect *discrete samples* for cyanide and volatile organics.

2. The discharge shall be free from:

- a. Materials that will settle to form objectionable sludge or bottom deposits.
- b. Floating debris, oil, grease, scum, or other floating materials.
- c. Substances in amounts sufficient to produce taste or odor in the water or detectable off flavor in the flesh of fish, or in amounts sufficient to produce objectionable odor, turbidity, or other conditions in the receiving waters.
- d. High temperatures; biocides; pathogenic organisms; toxic, corrosive, or other deleterious substances at levels or in combinations sufficient to be toxic or harmful to human health or aquatic life, or in amounts sufficient to interfere with any beneficial use of the water.
- e. Substances or conditions or combinations thereof in concentrations which produce undesirable aquatic life.
- f. Toxic pollutants in concentrations that are lethal to, or that produce detrimental physiological responses in human, plant, or animal life. Detrimental responses include, but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species and/or significant alterations in population or community ecology or receiving water biota.

3. The discharge shall not cause:

- a. The fecal coliform concentration in the receiving waters to exceed a geometric mean of 200 CFU/100 mL in not less than five samples equally spaced over a 30-day period, nor any single sample to exceed 400 CFU/100 mL at any time.
- b. The fecal coliform concentration in the receiving waters supporting shellfish habitat and where shellfish are harvested for human consumption to exceed a geometric mean of 14 CFU/100 mL.
- c. The concentration of dissolved oxygen in the receiving waters to be less than 75% saturation.
- d. The concentrations of total filterable suspended solids in the receiving waters to be increased from ambient conditions at any time, or to exceed 40 mg/L except when due to natural conditions.
- e. The salinity of the receiving waters to be altered more than 10% of the ambient conditions, or more than that which would otherwise adversely affect the sedimentary patterns and indigenous biota, except when due to natural causes.



- f. The temperature of the receiving waters to vary by more than 1.0° C from ambient conditions.
  - g. The turbidity at any point in the receiving waters, as measured by nephelometric turbidity units (NTU), to exceed 1.0 NTU over ambient conditions except when due to natural conditions.
  - h. The health and life history characteristics of aquatic organisms in receiving waters affected by the discharge to differ substantially from those for the same receiving waters in areas unaffected by the discharge. Also, the discharge shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life in the receiving waters.
4. Discharge Prohibitions
- a. The discharge of radioactive materials at any level to the receiving waters is strictly prohibited.
5. Whole Effluent Toxicity Monitoring Requirements

The permittee shall conduct quarterly toxicity tests on composite effluent samples<sup>12</sup>. If, after two years of toxicity testing, all acute toxicity test results are "pass", as defined in Part A.5.b of this permit, then the monitoring frequency for acute toxicity shall be reduced to annually (October).

a. Test Species and Methods

The permittee shall conduct toxicity tests with the freshwater amphipod, *Hyaella azteca*. The acute toxicity of the effluent shall be estimated using a 48-hour static test, as specified in *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms* (EPA/600/4-90/027F, August 1993)<sup>13</sup>.

b. Definition of Toxicity

Acute toxicity is significantly reduced survival of experimental test organisms exposed to a single concentration of 100 percent effluent when compared to the survival of control organisms, where toxicity test results are evaluated using a t-

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<sup>12</sup> The permittee shall attempt to ensure a total holding time from collection of the last portion of the composite sample until arrival at the laboratory of not more than 36 hours. Should longer than a 36-hour holding time be anticipated, the permittee shall petition USEPA Region 9 (CMD-5) for an extension of the holding time (see Section 8.5.4, EPA/600/4-90/027F). The extended holding time shall not exceed 72 hours.

<sup>13</sup> Or most recent edition.

test<sup>14</sup>. When using a t-test, toxicity test results are reported as “pass” (no significant difference in survival), or “fail” (significant difference in survival). For this discharge, the presence of acute toxicity is defined by a “fail” toxicity test result.

c. Quality Assurance

- (1) 100 percent effluent and a control shall be tested.
- (2) Control and dilution water should be lab water, as described in the test methods manual. If the dilution water used is different from the culture water, a second control using culture water shall also be tested.
- (3) If organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient.
- (4) Reference toxicant tests shall be conducted using the same test conditions as effluent toxicity tests (*i.e.*, same test duration, *etc.*).
- (5) If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the permittee must re-sample and re-test within approximately 14 days.
- (6) When effluent monitoring frequencies for whole effluent toxicity and priority toxic pollutants are concurrent, then chemical analyses for priority toxic pollutants shall be performed on a split of the sample collected for whole effluent toxicity testing.

d. Preparation of Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan

The permittee shall submit to USEPA Region 9 an initial investigation toxicity reduction evaluation (TRE) workplan [approximately 1-2 pages] within 90 days of the effective date of this permit. This workplan shall describe steps which the permittee intends to follow in the event that toxicity (as defined) is detected, and should include at minimum:

- (1) A description of the investigation and evaluation techniques that would be used to identify potential causes/sources of toxicity, effluent variability,

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<sup>14</sup>

See Section 11.3, EPA/600/4-90/027F.

treatment system efficiency;

- (2) A description of the facility's method of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in operation of the facility;
- (3) If a toxicity identification evaluation (TIE) is necessary, who (*e.g.*, contract laboratory, *etc.*) will conduct the TIE.

e. Additional (Accelerated) Toxicity Testing

- (1) If toxicity (as defined) is detected, then the permittee shall conduct three additional tests, one approximately every 14 days, over a six week period. Effluent sampling for the first test of the three additional tests shall commence within approximately 24 hours of receipt of the test results exceeding a "fail" toxicity test result;
- (2) However, *if implementation of the initial investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.)*, then the permittee shall conduct only the first test of the three additional tests required above. If toxicity (as defined) is not detected in this first test, the permittee may return to the normal sampling frequency required in Part A.1.a of this permit. If toxicity (as defined) is detected in this first test, then Part A.5.f of this permit shall apply.
- (3) If toxicity (as defined) is not detected in any of the three additional tests required above, then the permittee may return to the normal sampling frequency required in Part A.1.a of this permit.

f. Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE)

- (1) If toxicity (as defined) is detected in any of the three additional tests, then, based on an evaluation of the test results and additional available information, USEPA Region 9 may determine that the permittee shall initiate a TRE, in accordance with the permittee's initial investigation TRE workplan and *Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatment Plants* (EPA/600/2-88/062, 1989). Moreover, the permittee shall develop a detailed TRE workplan which includes:
  - (a) Further actions to investigate/identify the cause(s) of toxicity;
  - (b) Actions the permittee has taken/will take to mitigate the impact of the discharge, to correct the noncompliance, and to prevent the

recurrence of toxicity;

(c) A schedule under which these actions will be implemented;

and shall submit this workplan to USEPA Region 9 for approval.

- (2) As part of this TRE process, the permittee may initiate a TIE using the test methods manuals, EPA/600/R-96/054 (Phase I), EPA/600/R-92/080 (Phase II), and EPA/600/R-92/081 (Phase III), to identify the cause(s) of toxicity.
- (3) If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by Part A.5.e of this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE.

g. Reporting

- (1) The permittee shall submit a full report of toxicity test results, including any toxicity testing required by Parts A.5.e and A.5.f of this permit, with the DMR for the month in which the toxicity tests are conducted. A full report shall consist of: (1) toxicity test results (i.e., “pass” or “fail”, etc.), and (2) dates of sample collection and initiation of each toxicity test. Toxicity test results shall be reported according to the test methods manual chapter on Report Preparation.

If the initial investigation TRE workplan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the DMR for the month in which investigations conducted under the TRE workplan occurred.

- (2) Within 14 days of receipt of a “fail” toxicity test result, the permittee shall provide written notification to USEPA Region 9 of:
  - (a) Findings of the TRE or other investigation to identify the cause(s) of toxicity;
  - (b) Actions the permittee has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity;
  - (c) When corrective actions, including a TRE, have not been *completed*, a schedule under which corrective actions will be

implemented; or

- (d) The reason for not taking corrective action, if no action has been taken.

h. Toxicity Reopener

This permit may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information, or to implement any USEPA Region 9-approved new Territory water quality standards applicable to effluent toxicity.

- 6. Samples taken in compliance with the effluent monitoring requirements specified above shall be taken at the following locations:
  - a. Influent samples shall be taken after the last addition to the collection system and prior to any in-plant return flows and the first treatment process, where representative samples of the influent can be obtained.
  - b. Effluent samples shall be taken after any in-plant return flows and the last treatment process and prior to mixing with the receiving waters, where representative samples of the effluent can be obtained.

**B. DEFINITIONS**

- 1. *Average monthly discharge limitation* means the highest allowable average of “daily discharges” over a calendar month, calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.
- 2. *Average weekly discharge limitation* means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week.
- 3. *8 hour Composite sample* means a combination of eight equal individual portions taken at equal time intervals over any 8-hour period that reasonably represents the calendar day. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.
- 4. *24 hour Composite sample* means a combination of eight individual portions taken at equal time intervals over any 24-hour period that reasonably represents the calendar day.

The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling.

5. *Daily discharge* means the “discharge of a pollutant” measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the day.
6. *Discrete sample* means any individual sample collected in less than 15 minutes. The sampling period shall coincide with the period of maximum discharge flow.
7. *Maximum daily discharge limitation* means the highest allowable “daily discharge.”

#### **C. PRETREATMENT REQUIREMENTS**

1. Within 180 days of the effective date of this permit, the permittee shall submit for USEPA Region 9 and CNMI DEQ approval copies of the permittee’s education programs designed to minimize the entrance of nonindustrial toxic pollutants/pesticides and hazardous industrial wastes into the Sadog Tase Wastewater Treatment Plant. These programs shall be implemented by the permittee no later than 180 days following approval by USEPA Region 9 and CNMI DEQ. Copies of all education materials from the period covering the previous calendar year shall be submitted with the monthly DMRs due by April 28th to USEPA Region 9 and CNMI DEQ.
2. At the direction of USEPA Region 9 and CNMI DEQ, the permittee shall develop and implement additional source control programs, if monitoring indicates that known or suspected water quality, sediment accumulation, or biological problems in the receiving waters are related to toxic pollutants/pesticides and/or hazardous wastes in the Sadog Tase Wastewater Treatment Plant discharge. These programs shall include:
  - a. A schedule of activities for identifying sources; and
  - b. A schedule for the development and implementation of control programs, to the extent practicable, for identified sources.
3. At the direction of USEPA Region 9 and CNMI DEQ, the permittee shall survey industrial users to identify waste disposal practices.

#### **D. SLUDGE/BIOSOLIDS LIMITATIONS AND MONITORING REQUIREMENTS**

1. All biosolids <sup>15</sup> generated by the permittee shall be reused or disposed of in compliance with applicable portions of:
  - a. 40 CFR 503: For biosolids that are land applied, placed on a surface disposal site (dedicated land disposal site or monofill), or incinerated; 40 CFR 503, Subpart B (land application) applies to biosolids applied for the purpose of providing nutrients or conditioning the soil for crops or vegetation. 40 CFR 503 Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal;
  - b. 40 CFR 258: For biosolids disposed in municipal solid waste landfills;
  - c. 40 CFR 257: For all biosolids use and disposal practices not covered in 40 CFR 258 or 503.
2. The permittee is responsible for assuring that all biosolids produced at the sewage treatment plant are used or disposed of in accordance with 40 CFR 257, 258, and 503, whether the permittee reuses or disposes of the biosolids directly or transfers the biosolids to another entity for further treatment, reuse, or disposal. The permittee is responsible for informing subsequent preparers, appliers, and disposers of the requirements which these entities must meet under 40 CFR 257, 258, and 503.
3. No biosolids shall be allowed to enter wetlands or other waters of the United States.
4. Biosolids treatment, storage, reuse, or disposal shall not contaminate groundwater.
5. Biosolids treatment, storage, reuse, or disposal shall be performed in a manner as to minimize nuisances such as objectionable odors or flies.
6. The permittee shall assure that haulers transporting biosolids for off-site treatment, reuse, or disposal take all necessary measures to keep the biosolids contained.
7. If biosolids are stored for over two years from the time it was generated, the permittee must ensure compliance with all requirements for surface disposal in 40 CFR 503 Subpart C, or must submit a written request for longer temporary storage, including information required in 40 CFR 503.20(b), to USEPA Region 9.
8. Sludge containing PCBs equal to or greater than 50 mg/kg of total solids (100% dry weight basis) shall be disposed of in accordance with 40 CFR 761.
9. Any biosolids treatment, storage, or disposal site shall have adequate facilities which

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Biosolids means stabilized, non-hazardous sewage sludge.

divert surface runoff from adjacent areas, protect site boundaries from erosion, and prevent any conditions that would cause drainage to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.

10. Monitoring shall be conducted as follows:

- a. Biosolids shall be tested during October of years 2000 and 2003 for all pollutants listed under section 307(a) of the Act, and for sodium, chloride, and electrical conductivity. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.
- b. Biosolids shall be tested during October of years 2000 and 2003, or more frequently if necessary, to determine hazardousness using the Toxicity Characterization Leachate Procedure (see Method 1311 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846). Contaminants and regulatory levels are found in Table 1 in 40 CFR 261.24(b).
- c. Biosolids which are land applied or placed in a surface disposal site shall be tested for metals as required in 40 CFR 503.16 and 40 CFR 503.26 using *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (see 40 CFR 503.8(b)(4)), and for organic-N, ammonium-N, and nitrate-N using *Standard Methods for the Examination of Water and Wastewater* (1989). The appropriate monitoring frequency for these tests shall be determined by the biosolids volume land applied or placed in a surface disposal site. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids Volume (dry metric tons/year)	Monitoring Frequency
0 - 290	Annually (Oct)
290 - 1500	Quarterly (Jan/Apr/Jul/Oct)
1500 - 15,000	Bi-Monthly (Jan/Mar/May/Jul/Sep/Nov)
> 15,000	Monthly

- d. For biosolids which are land applied, the permittee shall demonstrate that biosolids meet Class A or Class B pathogen requirements by one of the methods listed in 40 CFR 503.32. The permittee shall track and keep records of the operational parameters used to achieve the vector attraction reduction



requirements in 40 CFR 503.33(b).

- e. Biosolids that are placed on a surface disposal site shall be monitored as follows:
    - (1) Biosolids shall be tested for metals as required in 40 CFR 503.26 using *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (see 40 CFR 503.8(b)(4)), at the appropriate frequency required by Part D.10.c of this permit. Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.
    - (2) Prior to placement on a surface disposal site, the permittee shall demonstrate that biosolids meet Class B pathogen requirements, or shall ensure that the site is covered at the end of each operating day.
    - (3) The permittee shall track and keep records of the operational parameters used to achieve the vector attraction reduction requirements in 40 CFR 503.33(b).
    - (4) When biosolids are placed on a surface disposal site, a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.
  - f. Biosolids disposed of in a municipal solid waste landfill unit shall be tested semi-annually using the Paint Filter Test (Method 9095 in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*) to demonstrate compliance with 40 CFR 258.28 which prohibits disposal of materials with free liquids in a municipal solid waste landfill unit.
11. For biosolids which are land applied, the permittee, either directly or through contractual agreements with their biosolids management contractors, shall comply with the following 40 CFR 503 notification requirements:
- a. Prior to initiating any new treatment, reuse, or disposal practice, the Permittee shall submit a description of the practice to USEPA Region 9 and CNMI DEQ. This description shall include: results of initial monitoring/analyses for pollutants regulated under the new practice; names and addresses of contractors involved in the new practice; locations of treatment, reuse, or disposal sites; and proposed start dates. For land application of Class B biosolids, proposed application rates and crops to be grown shall be submitted. For surface disposal sites, a groundwater monitoring plan shall be submitted.
  - b. For biosolids that are land applied, if the permittee's biosolids do not meet 40

CFR 503.13 Table 3 metals concentration limitations, then the permittee must require the land applier to notify USEPA Region 9 of any previous site applications of biosolids subject to cumulative loading limitations and the cumulative amounts of pollutants applied to date at the site, per 40 CFR 503.12(e) and (j).

- c. For biosolids that are land applied, the permittee shall notify the applier in writing of the nitrogen content of the biosolids, and of all the applier(s) requirements in 40 CFR 503, including the requirement that the applier certify that management practices, site restrictions, and any applicable vector attraction reduction requirements in 40 CFR 503 Subpart B have been met. The permittee shall require the applier to certify at the end of 38 months following application of Class B biosolids that harvesting restrictions in effect have been met.
  - d. If bulk biosolids are shipped to another State/Tribal/Territory Lands, the permittee must send notice prior to the initial shipment of bulk biosolids to permitting authorities in the receiving State/Tribal/Territory Land (the USEPA Regional Office for that area and the State/Tribal/Territory authorities).
12. The permittee shall submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator by February 19th of each year for the period covering the previous calendar year. The report shall include:
- a. The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.
  - b. Results of all monitoring required by Part D.10 of this permit.
  - c. Descriptions of pathogen requirements, vector attraction reduction requirements, site and harvesting restrictions, management practices, and certifications, as required in 40 CFR 503.17 and 40 CFR 503.27.
  - d. For surface disposal sites, results of any required groundwater monitoring or certification by a groundwater scientist that the application/disposal will not contaminate an aquifer.
  - e. Names and addresses of land appliers, surface disposal site operators, and landfill operators; and volumes applied or disposed (dry metric tons).
  - f. Names, mailing addresses, and street addresses of entities who received biosolids for further treatment, storage, disposal in a municipal solid waste landfill, or for other use or disposal methods not covered above, and volumes delivered to each.
13. The permittee shall require any appliers of Class B biosolids and any surface disposal site

operators to submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator by February 19th of each year, for the period covering the previous calendar year. The report shall include: names and addresses of land appliers and surface disposal site operators, name, location (site addresses and latitude/longitude), and size (hectares) of site(s), volumes applied/disposed (dry metric tons) and for land application, biosolids loading rates (metric tons per hectare), nitrogen loading rates (kg/ha), dates of application, crops grown, dates of seeding and harvesting, and certifications that the requirements to obtain information in 40 CFR 503.12(e)(2), management practices in 40 CFR 503.14, and site restrictions in 40 CFR 503.32(b)(5) have been met.

14. The general requirements in 40 CFR 503.12 and the management practices in 40 CFR 503.14 do not apply when bulk biosolids are applied to land, if the biosolids meet the pollutant concentrations in 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), and one of the vector attraction reduction requirements in 40 CFR 503.33(b)(1) through (b)(8).

#### **E. RECEIVING WATER MONITORING REQUIREMENTS AND CONDITIONS**

1. The permittee shall conduct the following receiving water monitoring program (*i.e.*, water column monitoring) in Class A marine receiving waters in Tanapag Harbor (named Puerto Rico Industrial) of the Philippine Sea. The permittee shall verify all station locations (latitude and longitude) and submit this information with a map showing the locations of these stations in the first quarterly receiving water monitoring report.

##### **a. Water Column Monitoring Stations (see Attachment 3)**

Station Name	Location	Region	Site	Comments
ZID-1	49 feet seaward from the terminus of the Saipan Lagoon Outfall, on the axis of the outfall/diffuser system	1	n/a	n/a
ZID-2	49 feet shoreward from the terminus of the Saipan Lagoon Outfall, on the axis of the outfall/diffuser system	1	n/a	n/a
N. Puerto Rico Dump Beach	n/a	1	11.1	n/a

##### **b. Water Column Monitoring**

Receiving Water Characteristic	Units	Site	Monitoring Frequency	Sample Type/ Sampling Depths *
Fecal coliform	CFU/100 mL	ZID-1, ZID-2, 11.1	Weekly	Grab
Enterococci	CFU/100 mL	"	"	"
pH	units	"	"	"
Total Nitrogen	mg/L	"	"	"
Total Phosphorous	mg/L	"	"	"
Dissolved Oxygen	mg/L	"	"	"
Turbidity	NTU	"	"	Nephelometer
Chlorophyll a	ug/L	"	"	Grab
* For grab samples, the sampling depth profile at each station is 0.5 m and 5 m below the surface, or as directed by USEPA Region 9 and CNMI DEQ. Samples shall be collected and analyzed according to <i>Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods</i> (EPA 430/9-86-004), or as directed by CNMI DEQ.				

2. The permittee shall submit quarterly water column monitoring reports to USEPA Region 9 and CNMI DEQ by 28th of April, July, October, and January for each period covering the previous three calendar months. These reports shall include:
  - a. A description of climatic and receiving water characteristics at the time of sampling (*e.g.*, weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, *etc.*).
  - b. A description of the sample collection and preservation procedures used in the receiving water monitoring program.
  - c. A description of the specific method used for laboratory analysis.
  - d. An in-depth discussion of the results of the receiving water monitoring program with regard to compliance with this permit and Section 403(c) of the Act. All tabulations and computations shall be explained.
  
3. At the direction of USEPA Region 9 and CNMI DEQ, the permittee shall submit for USEPA Region 9 and CNMI DEQ approval a revised water quality monitoring program

and/or a sediment quality, biological resources, and/or human health risk monitoring program; *CWA Section 403: Procedural and Monitoring Guidance* (EPA 842-B-94-003, 1994) should be consulted in conjunction with monitoring program development.

## **F. GENERAL MONITORING AND REPORTING REQUIREMENTS**

1. All wastewater monitoring, and sludge/biosolids monitoring, receiving water monitoring, sample preservation, and analyses shall be performed as described in the most recent edition of 40 CFR 136, Appendix B, unless otherwise specified in this permit. For priority toxic pollutant effluent analyses, the permittee shall utilize an approved test procedure with a Method Detection Limit <sup>16</sup> (MDL) that is lower than the marine waters acute, chronic, and human health criteria concentrations listed in Tables A and B of *CNMI Water Quality Standards*. If the MDL is higher than the criteria concentrations, then the permittee shall utilize the approved test procedure with the lowest MDL. Effluent analyses for metals shall measure “total recoverable metal”, except as provided under 40 CFR 122.45(c)(3).
2. The permittee shall have and implement an acceptable written quality assurance project plan for laboratory analyses. All QA/QC samples must be analyzed on the same dates that wastewater samples are analyzed. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA Region 9, the permittee shall participate in the NPDES discharge monitoring report QA performance study. The permittee must have a success rate  $\geq 80\%$ .
3. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this permit.
4. The permittee shall submit influent and effluent monitoring results on monthly Discharge Monitoring Report (DMR) forms (EPA No. 3320-1) to USEPA Region 9 and CNMI DEQ by the 28th of April, July, October, and January for each period covering the previous three calendar months (*e.g.* January, February, and March monthly DMRs are due by April 28th). Unless otherwise specified, effluent flow shall be reported in terms of the arithmetic mean flow over each monthly period, and the maximum daily flow over that monthly period.
5. For the purposes of reporting, the permittee shall use the reporting threshold equivalent to the laboratory’s method detection limit <sup>16</sup> (MDL). As such, the permittee must utilize a standard calibration where the lowest standard point is equal to or less than the

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<sup>16</sup> The Method Detection Limit (MDL) is the minimum concentration of an analyte that can be detected with 99% confidence, as defined by a specific laboratory method in 40 CFR 136, Appendix B.

concentration of the minimum level <sup>17</sup> (ML). Analytical results at or above the laboratory's MDL shall be reported on the DMR as the measured concentration. For analytical results between the MDL and the ML, the permittee shall report in the comment section on the DMR the standard deviation (S) value (determined by the laboratory during the MDL study) and the number of sample aliquots (n). Analytical results below the laboratory's MDL shall be reported as zero (*i.e.*, "0").

6. In accordance with the conditions of the water quality certification (authorized under Section 401 of the Act) and the zone of mixing approval granted by CNMI DEQ on March 30, 2001 for this permit, the permittee shall:
  - a. Inform CNMI DEQ of all bypasses to the collection and treatment system, including all sanitary sewer overflows (SSOs), immediately (within one hour) upon knowledge of the bypass/SSO. Additionally, the permittee shall provide a written report summarizing all bypasses/SSOs to CNMI DEQ on or before the 15<sup>th</sup> day of each month, for the previous calendar month. This report shall list the date, time, and location of all bypasses/SSOs, an estimate of the wastewater volume for each bypass/SSO, a brief description of the cause of each bypass/SSO, and corrective actions taken by the permittee.
  - b. Inform CNMI DEQ of all equipment failures that have the potential to adversely affect effluent quality, within 24 hours of knowledge of such failure.
  - c. In accordance with Section 12 of *CNMI Water Quality Standards*, the permittee shall allow the Director (or his authorized representative) prompt access to the Sadog Tase WWTP and appurtenances for the purpose of inspecting the premises for compliance with the terms of the water quality certification. The inspection may be made with(out) advance notice to the permittee, with good purpose, at the discretion of the Director, but shall be made at reasonable times, unless an emergency dictates otherwise.
7. Duplicate signed copies of all reports required herein shall be submitted to the Regional Administrator and CNMI DEQ at the following addresses:

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<sup>17</sup> The Minimum Level (ML) is the concentration in a sample equivalent to the concentration of the lowest calibration standard analyzed in a specific analytical procedure, assuming that all the method-specific sample weights, volumes, and processing steps have been followed. Where a promulgated ML is not available, an interim ML is calculated by multiplying the MDL by a factor of 3.18 and then rounding this calculated value to the nearest multiple of  $(1, 2, \text{ or } 5) \times 10^n$ , where  $n$  is zero or an integer. Alternatively, interim MLs for metals may be rounded to the nearest whole number.

USEPA Region 9  
Pacific Insular Area Program (CMD-1)  
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San Francisco, CA 94105-3901  
Telephone: 415/744-1484

Division of Environmental Quality  
Commonwealth of the Northern Mariana  
Islands  
P.O. Box 1304  
Saipan, MP 96950  
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*Attachment 1:*  
**LOCATION MAP**



*Attachment 2:*  
**PROCESS DIAGRAM**

*Attachment 3:*

RECEIVING WATER MONITORING STATIONS

(see first quarterly receiving water monitoring report)

*Attachment 4:*

**STANDARD NPDES PERMIT CONDITIONS**

